US010030889B2

(12) **United States Patent**
Merritt

(10) **Patent No.: US 10,030,889 B2**
(45) **Date of Patent: Jul. 24, 2018**

(54) **PATIO HEATER BASE AND POLE ASSEMBLY**

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(73) Assignee: **Superior Radiant Products**

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 337 days.

(21) Appl. No.: **14/933,157**

(22) Filed: **Nov. 5, 2015**

(65) **Prior Publication Data**

US 2016/0138828 A1 May 19, 2016

Related U.S. Application Data

(60) Provisional application No. 62/080,438, filed on Nov. 17, 2014.

(51) **Int. Cl.**

F24B 1/02	(2006.01)
F24H 9/02	(2006.01)
F24H 9/06	(2006.01)
F24C 1/12	(2006.01)
F24C 1/16	(2006.01)

(52) **U.S. Cl.**

CPC ***F24H 9/02*** (2013.01); ***F24C 1/12*** (2013.01); ***F24C 1/16*** (2013.01); ***F24H 9/06*** (2013.01)

(58) **Field of Classification Search**

USPC 126/72; 392/407

See application file for complete search history.

(56) **References Cited**

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(57) **ABSTRACT**

The present concept is a patio heater assembly. The patio heater assembly includes a base and at least one support platform spaced from the base that is supported and attached to a vertically extending rear upright and at least one vertically extending forward upright. The uprights are attached at one end to the base and the other end to the at least one support platform. There is a pole moveable between a collapsed position and a raised assembled position that includes at least one pole flange at a bottom end of the pole. The pole flange rigidly connects to the support platform when in the raised assembled position, thereby maintaining the patio heater assembly in the raised assembled position. While in the collapsed position the pole flange rests on the base.

14 Claims, 3 Drawing Sheets

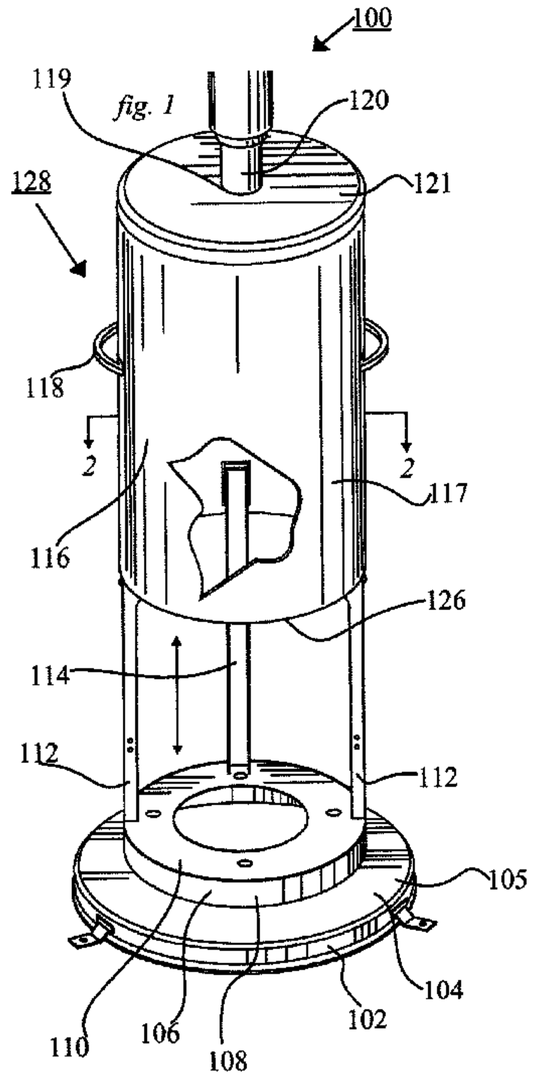


fig. 1

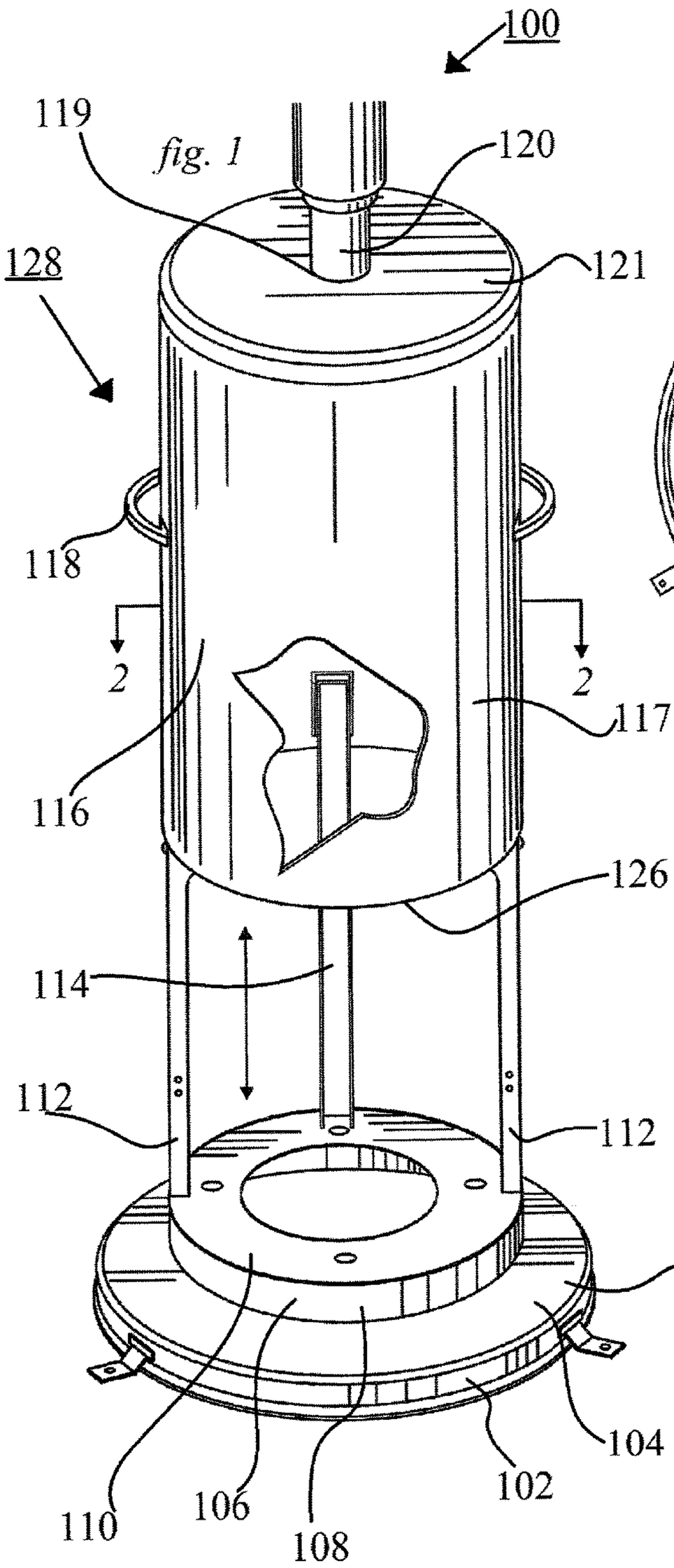


fig. 1

fig. 2

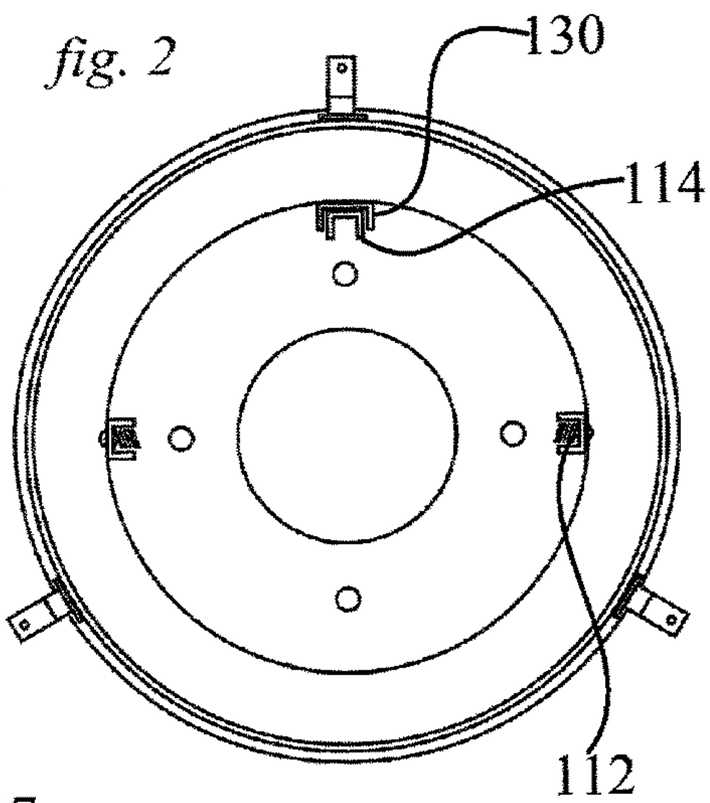


fig. 3

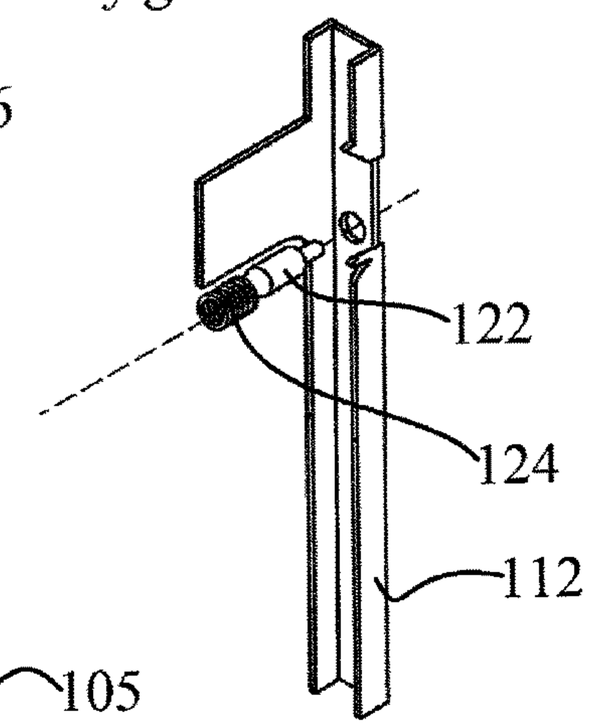


fig. 4

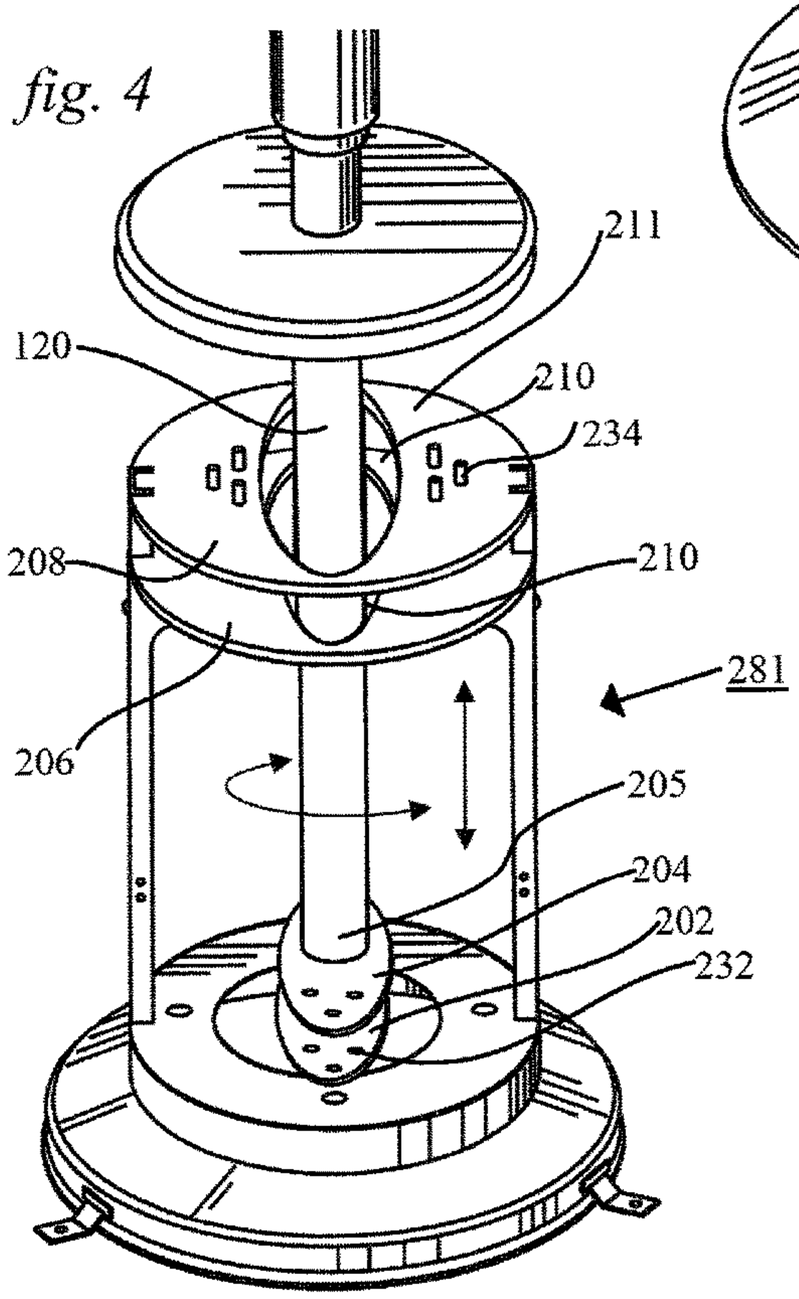


fig. 5

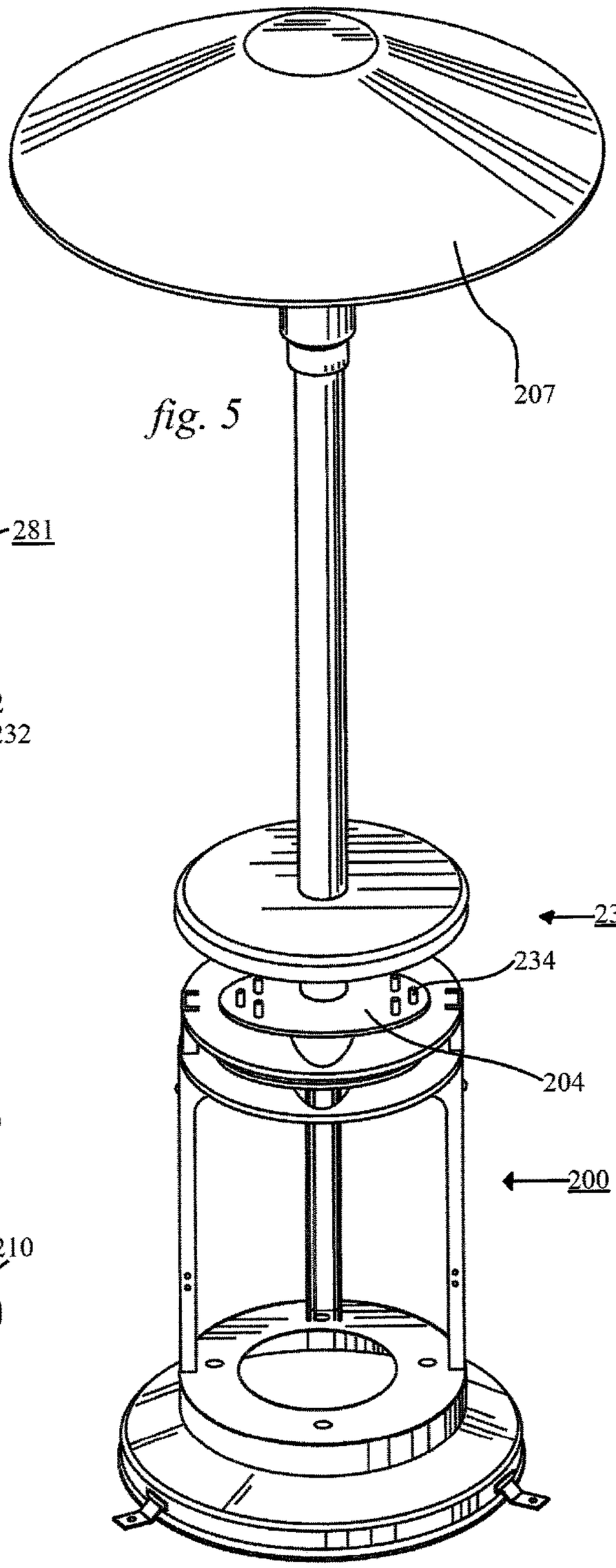
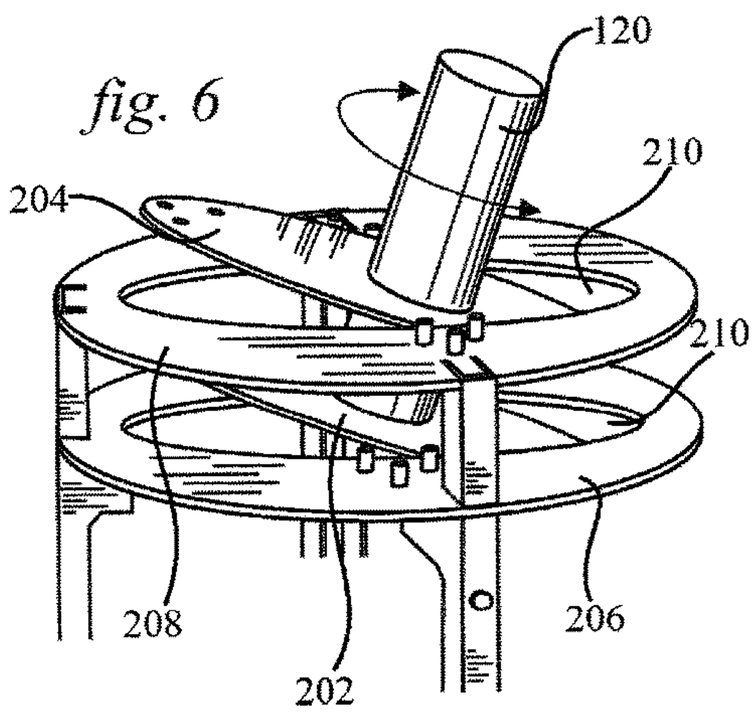


fig. 6



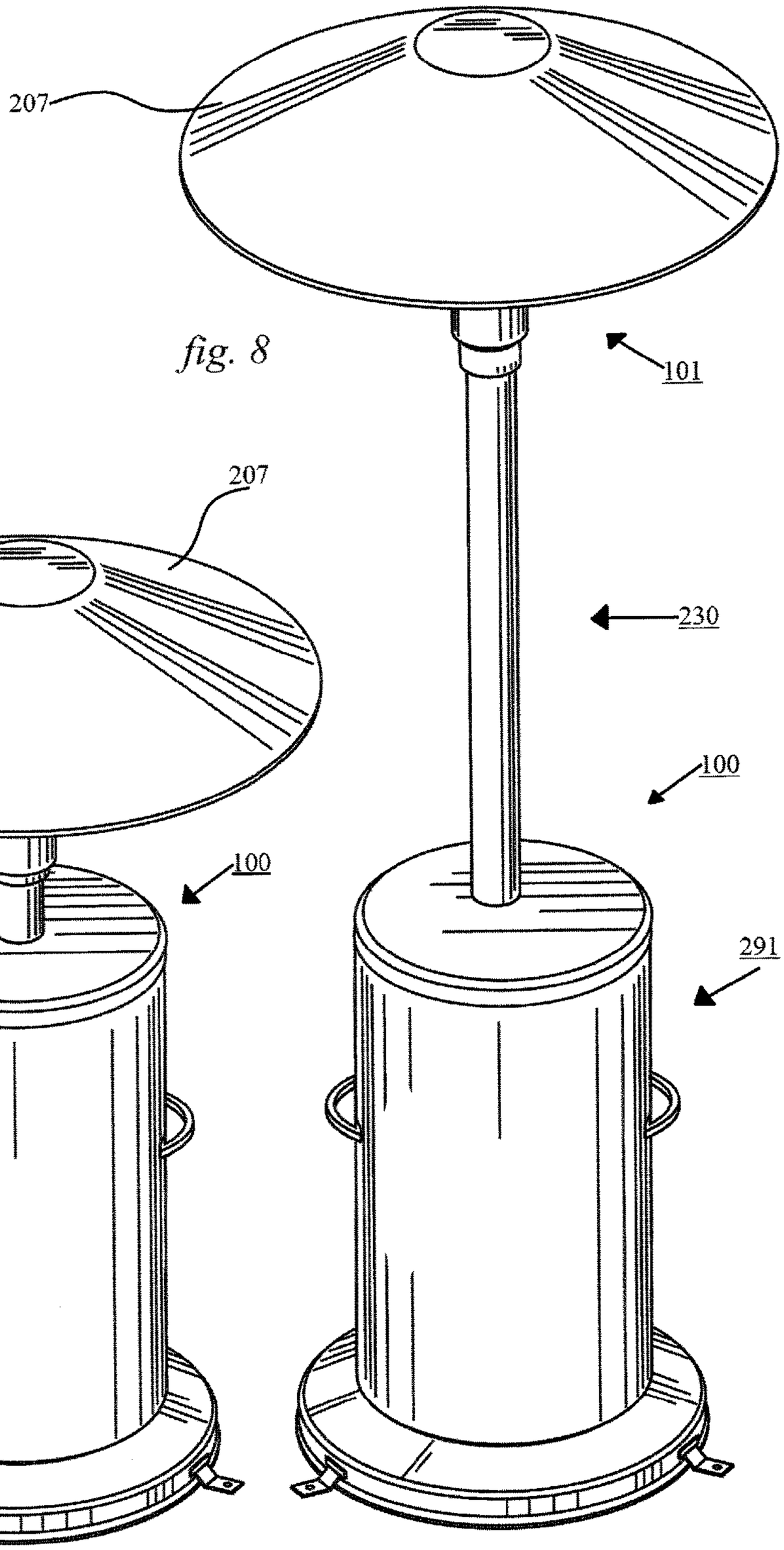


fig. 8

fig. 7

PATIO HEATER BASE AND POLE ASSEMBLY

This application claims priority from the previously filed provisional application No. 62/080,438, filed on Nov. 17, 2014 by Superior Radiant Products Ltd. under the title: PATIO HEATER BASE AND POLE ASSEMBLY.

FIELD OF THE INVENTION

The present concept relates to patio heaters and more particularly relates to the construction and structure of the base and pole assembly.

SUMMARY OF THE INVENTION

The present concept is a patio heater assembly comprising:

a) a base and at least one support platform spaced from the base and supported and attached to a vertically extending rear upright and at least one vertically extending forward upright, the uprights attached at one end to the base and the other end to the at least one support platform;

b) a pole moveable between a collapsed position and a raised assembled position,

c) the pole includes at least one pole flange at a bottom end of the pole, the pole flange for rigidly connecting to the support platform when in the raised assembled position, thereby maintaining the patio heater assembly in the raised assembled position, wherein in the collapsed position the pole flange rests on the base.

Preferably that further includes a shroud slide-ably engaging over the uprights and slide ably moveable between an upper supported position above the base and a lower seated position.

Preferably wherein the shroud includes a guide bracket for slide-ably engaging along the rear upright when the shroud is moved between a lower seated position and the upper supported position.

Preferably wherein the guide bracket is a U shaped bracket such that the rear upright nests within the U of the guide bracket.

Preferably wherein the rear upright is a U shaped channel dimensioned to nest with the U shaped bracket.

Preferably wherein the shroud is cylindrical having a cylindrical side wall and a horizontal top cover such that in the lower seated position the shroud rests on the base and conceals the at least one support platform.

Preferably wherein in the upper supported position the shroud is resting on pins resiliently biased to extend beyond the side wall of the shroud.

Preferably wherein to move the shroud into the lower seated position finger pressure is used to urge the pins inwardly interior of the side wall of the shroud thereby allowing the shroud to slide-ably drop to the lower seated position.

Preferably wherein the shroud further includes a pole aperture for slide-ably receiving the pole there through thereby slide-ably guiding the shroud between the upper supported position and a lower seated position.

Preferably wherein the base includes a lower base and a circular upper base, the upper base having a diameter slightly smaller than an inner diameter of the shroud such that the shroud fits snugly over the upper base keeping the shroud in place in the lower seated position.

Preferably wherein the support platform includes a flange opening for receiving there through the pole flange which is dimensioned slightly smaller to fit through the flange opening when then pole is moved from the collapsed position to the raised assembled position.

Preferably wherein the flange opening is substantially the same shape as the pole flange which is dimensioned to just fit through the flange opening when then pole is moved from the collapsed position to the raised assembled position.

Preferably wherein the pole flange is rotated ninety degrees to rest on a top surface of the support platform thereby putting the pole in the assembled position.

Preferably wherein the pole flange and the flange opening are oval in shape.

Preferably wherein the pole flange and the flange opening are rectangular in shape.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is schematic partial perspective view of the base assembly of a patio heater.

FIG. **2** is a cross sectional view of the patio heater base assembly, taken along lines **2-2**.

FIG. **3** is a partial schematic perspective view of the spring and pin assembly on the forward uprights.

FIG. **4** is a schematic perspective view of the base and pole assembly without the shroud in place.

FIG. **5** is a schematic perspective view of the base and pole assembly without the shroud in place in an assembled position.

FIG. **6** is a schematic partial perspective view of a portion of the base and pole assembly.

FIG. **7** is a schematic perspective view of the pole in the collapsed position.

FIG. **8** is a schematic perspective view of the base pole in the assembled position.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring first of all to FIGS. **1** through **3** which depict the base assembly **100** of the present concept.

Base assembly **100** includes a lower base **102** having a lower horizontal surface **104** and a circular upper base **106** having an upper vertical surface **108** and an upper horizontal surface **110**.

Base assembly further includes forward uprights **112** and a rear upright **114**.

A shroud **116** is slide-ably received over the uprights in a vertical fashion using handles **118** in order to slide shroud **116** along the vertical uprights and along pole **120**. Shroud **116** is cylindrical, having a cylindrical side wall **117** and a top cover **121**. Forward uprights **112** each include a locking pin and spring assembly which includes a pin **122** and a spring **124** which moves outwardly to support a bottom edge **126** of shroud **116** thereby supporting shroud **116** in an upper supported position **128** as shown in FIG. **1**. Shroud **116** has a pole aperture **119** that receives the pole and guides shroud **116** between the upper supported position **128** and lower seated position **291** shown in FIG. **8**. In the upper supported position **128** the outer most portion of pin **122** engages with the bottom edge **126** of shroud **116** as shown in the diagram.

By using finger pressure to depress pin **122** so it no longer projects beyond bottom edge **126** thereby allowing shroud **116** to slideably move downwardly onto lower base **102** until bottom edge **126** comes to rest on the lower horizontal

surface **104** and is also abutting against upper vertical surface **108** thereby keeping the lower portion of shroud **116** firmly in place.

Shroud **116** further includes a U-shaped guide bracket **130** which moves slideably along rear upright **114** as shroud **116** is manually lifted slideably along the uprights and pole **120** thereby preventing rotation of shroud **116**.

Referring now to FIG. **4** which shows the pole assembly **200** a patio heater normally includes a fairly lengthy pole **120** which in this case can be collapsed into a collapsed position **281** in which pole **120** is retracted into the base assembly **100** until the bottom pole flange **202** makes contact with lower base **102**. The unit is normally shipped in the collapsed position **281**.

Pole **120** includes a lower pole flange **202** at the bottom end **205** of the pole and an upper pole flange **204** which corresponds to a lower support platform **206** and an upper support platform **208**.

Pole flanges **202** and **204** are dimensioned to fit through oval flange openings **210** as shown in FIG. **5** in order to move the pole assembly **200** from a shipping position to an assembled position **230** as shown in FIG. **5**.

As pole **120** is lifted each of the pole flanges **202** and **204** pass through the oval flange openings **210** until such time as the lower pole flange **202** and the upper pole flange **204** can be rested on the lower support platform **206** and top surface **211** of upper support platform **208** respectively as shown in FIG. **5**.

FIG. **7** shows base assembly and pole assembly in a collapsed position **281**. FIG. **8** shows base assembly **100** and pole assembly **181** in an assembled position **230**. FIGS. **7** and **8** depict the burner assembly **101** with reflector **207**.

By twisting pole **120** until such time as the flange apertures **232** register with locking studs **234** thereby putting pole assembly **200** into the assembled position **230**. Nuts and or other fasteners can be used to permanently attach and maintain the pole in the assembled position **230** as shown in FIG. **5**.

It should be apparent to persons skilled in the arts that various modifications and adaptation of this structure described above are possible without departure from the spirit of the invention the scope of which defined in the appended claim.

I claim:

1. A patio heater assembly comprises:

a) a base and at least one support platform spaced from the base and supported and attached to a vertically extending rear upright and at least one vertically extending forward upright, the uprights attached at one end to the base and the other end to the at least one support platform;

b) a pole moveable between a collapsed position and a raised assembled position,

c) the pole includes at least one pole flange at a bottom end of the pole, the pole flange for rigidly connecting to the support platform when in the raised assembled position, thereby maintaining the patio heater assembly in the raised assembled position, wherein in the collapsed position the pole flange rests on the base; and

d) a shroud-slide-ably engaging over the uprights and slide ably moveable between an upper supported position above the base and a lower seated position.

2. The patio heater assembly claimed in claim **1** wherein the shroud includes a guide bracket for slide-ably engaging along the rear upright when the shroud is moved between a lower seated position and the upper supported position.

3. The patio heater assembly claimed in claim **2** wherein the guide bracket is a U shaped bracket such that the rear upright nests within the U of the guide bracket.

4. The patio heater assembly claimed in claim **3** wherein the rear upright is a U shaped channel dimensioned to nest with the U shaped bracket.

5. The patio heater assembly claimed in claim **1** wherein the shroud is cylindrical having a cylindrical side wall and a horizontal top cover such that in the lower seated position the shroud rests on the base and conceals the at least one support platform.

6. The patio heater assembly claimed in claim **5** wherein in the upper supported position the shroud is resting on pins resiliently biased to extend beyond the side wall of the shroud.

7. The patio heater assembly claimed in claim **6** wherein to move the shroud into the lower seated position finger pressure is used to urge the pins inwardly interior of the side wall of the shroud thereby allowing the shroud to slide-ably drop to the lower seated position.

8. The patio heater assembly claimed in claim **1** wherein the shroud further includes a pole aperture for slide-ably receiving the pole there through thereby slide-ably guiding the shroud between the upper supported position and a lower seated position.

9. The patio heater assembly claimed in claim **5** wherein the base includes a lower base and a circular upper base, the upper base having a diameter slightly smaller than an inner diameter of the shroud such that the shroud fits snugly over the keeping the shroud in place in the lower seated position.

10. The patio heater assembly claimed in claim **1** wherein the support platform includes a flange opening for receiving there through the pole flange which is dimensioned slightly smaller to fit through the flange opening when then pole is moved from the collapsed position to the raised assembled position.

11. The patio heater assembly claimed in claim **10** wherein the flange opening is substantially the same shape as the pole flange which is dimensioned to just fit through the flange opening when then pole is moved from the collapsed position to the raised assembled position.

12. The patio heater assembly claimed in claim **11** wherein the pole flange is rotated ninety degrees to rest on a top surface of the support platform thereby putting the pole in the assembled position.

13. The patio heater assembly claimed in claim **11** wherein the pole flange and the flange opening are oval in shape.

14. The patio heater assembly claimed in claim **11** wherein the pole flange and the flange opening are rectangular in shape.

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